

Notice of Allowability

Application No.

10/580,242

Examiner

John E. Chapman

Applicant(s)

TAKEYARI ET AL.

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2856

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☐ This communication is responsive to _____.
2. ☒ The allowed claim(s) is/are 1-5, 7, 8, 10-14 and 16.
3. ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 - a) ☒ All b) ☐ Some* c) ☐ None of the:
 1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

* Certified copies not received: _____.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.

THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

4. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
5. ☒ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
 - (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
 - 1) ☐ hereto or 2) ☐ to Paper No./Mail Date _____.
 - (b) ☒ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date _____.

Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
6. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

1. ☒ Notice of References Cited (PTO-892)
2. ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3. ☒ Information Disclosure Statements (PTO/SB/08),
Paper No./Mail Date 5/22/06
4. ☐ Examiner's Comment Regarding Requirement for Deposit
of Biological Material
5. ☐ Notice of Informal Patent Application
6. ☐ Interview Summary (PTO-413),
Paper No./Mail Date _____
7. ☒ Examiner's Amendment/Comment
8. ☒ Examiner's Statement of Reasons for Allowance
9. ☐ Other _____

EXAMINER'S AMENDMENT

1. An examiner's amendment to the record appears below. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it MUST be submitted no later than the payment of the issue fee.

Authorization for this examiner's amendment was given in a telephone interview with Peter Olexy on September 19, 2007.

The application has been amended as follows:

Paragraph 0002, line 3, "Patent Document 1" has been changed to --Patent Document 1: Japanese Laid-open Patent 2004-184081--.

Paragraph 0003, line 5, "Patent Document 2" has been changed to --Patent Document 2: Japanese Laid-open Patent 2003-279592--.

Paragraph 0006, line 1, "Patent Document 3" has been changed to --Patent Document 3: Japanese Laid-open Patent 4-274005--.

Paragraph 0007, line 1, "Patent Document 4" has been changed to --Patent Document 4: Japanese Laid-open Patent 2002-296293--.

Paragraph 0008, line 3, "Patent Document 5" has been changed to --Patent Document 5: Japanese Laid-open Patent 64-18063--.

Paragraph 0009, line 1, "Patent Document 6" has been changed to --Patent Document 6: Japanese Laid-open Patent 8-29446--.

Paragraph 0011, lines 15-20, have been deleted.

2. The following changes to the drawings have been approved by the examiner and agreed upon by applicant: Figs. 14-19 are to be designated by a legend such as --Prior Art-- because only that which is old is illustrated. In order to avoid abandonment of the application, applicant must make these above agreed upon drawing changes.

3. The following is an examiner's statement of reasons for allowance: The prior art fails to teach and/or fairly suggest a semiconductor acceleration sensor comprising a weight positioned in a center of the semiconductor acceleration sensor, a support frame for supporting the weight; at least one flexible arm, shaped in a thin beam, connecting an upper surface of the weight and an upper surface of the support frame at two first connection ends at both ends of the flexible arm between the weight and the support frame; and a plurality of piezoresistors, for measuring each component of three axis-components of the acceleration, disposed on an upper surface of the flexible arm and aligned along the upper surface of the flexible arm in a longitudinal direction of the flexible arm; wherein the flexible arm is composed of a flexible parallel part having substantially uniform width and connected at each end to a flexible widening part, wherein a maximum stress part is located on the flexible widening part, wherein each of the plurality of piezoresistors for measuring a first component of acceleration is shifted in position in the longitudinal direction of the flexible arm from the maximum stress part on the flexible widening part, and wherein each of the plurality of piezoresistors for measuring a second component of acceleration has one end positioned at the maximum stress part on the flexible widening part and the other end positioned on the flexible parallel part.

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Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."


4. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Hatano et al. discloses an acceleration sensor comprising a plurality of piezoresistors on a flexible arm, wherein each of the plurality of piezoresistors for measuring a first component (Z) of acceleration is shifted in position in the longitudinal direction of the flexible arm with respect to each of the plurality of piezoresistors for measuring a second component (X) of acceleration.

5. Any inquiry concerning this communication or earlier communications from the examiner should be directed to John E. Chapman whose telephone number is (571) 272-2191. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Hezron Williams can be reached on (571) 272-2208. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR

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system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.


John E Chapman
Primary Examiner
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